

METHOD OF CONTROLLING CLUTCH SLIP
DURING GEAR SHIFTS OF AN AUTOMATIC TRANSMISSION

ABSTRACT OF THE DISCLOSURE

A method is provided for controlling engagement of a clutch which carries torque before, during and after a shifting event in a transmission which is connected to a throttle-controlled engine. The method includes providing a feed forward input command which increases as the engine torque increases and decreases as the engine torque decreases. A feed-back input command is provided as a function of the error between measured clutch slip and a reference slip profile. The feed-forward input command and feed-back input command are summed to provide a clutch control command for controlling engagement of the clutch before, during and after the shifting event to allow a desired amount of clutch slip to damp excitation of the transmission.